UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORK

SECURITIES AND EXCHANGE
COMMISSION,

Plaintiff,

Civil Action No. 23 Civ. 1346 (JSR)

v.

TERRAFORM LABS PTE. LTD. and DO HYEONG KWON,

Hon. Jed S. Rakoff

Defendants.

DECLARATION OF RAJ UNNY
IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT

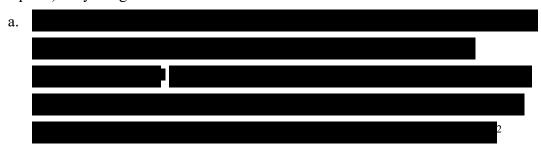
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I, Raj Unny, pursuant to 28 U.S.C. § 1746, declare as follows:

I. Introduction

1. I previously submitted an expert report in this matter on September 28, 2023 (the "Unny Opening Report" or my "Opening Report") as a rebuttal to the opinions and analyses put forth in the Corrected Expert Report of Dr. Edman, submitted on September 19, 2023 ("Edman Opening Report"). My assignment was to:



- 2. Dr. Edman has subsequently filed the Rebuttal Report of Dr. Edman ("Edman Rebuttal Report") on October 13, 2023. I have been asked by counsel for Terraform Labs Pte. Ltd ("Terraform Labs" or "TFL") and Mr. Do Hyeong Kwon to review and assess the opinions put forward by Dr. Edman in this Rebuttal Report.
- 3. My qualifications, a list of my prior testimony, and compensation for this matter are detailed in my Opening Report. As discussed in my Opening Report,

¹ In connection with the allegations put forward by the SEC in its Amended Complaint. *See* Amended Complaint, *Securities and Exchange Commission v. Terraform Labs Pte. Ltd. and Do Hyeong Kwon*, April 3, 2023.

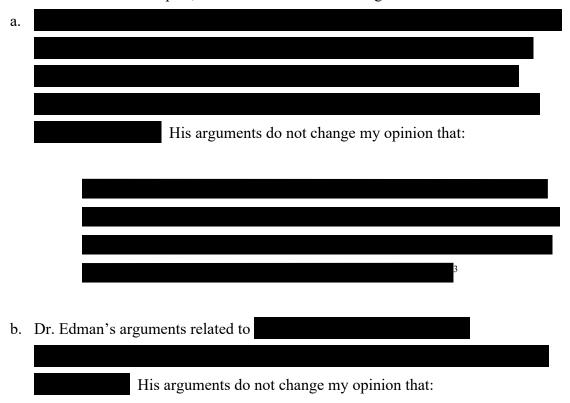
² Corrected Expert Report of Dr. Matthew J. Edman, September 19, 2023 ("Edman Opening Report"), ¶ 70.



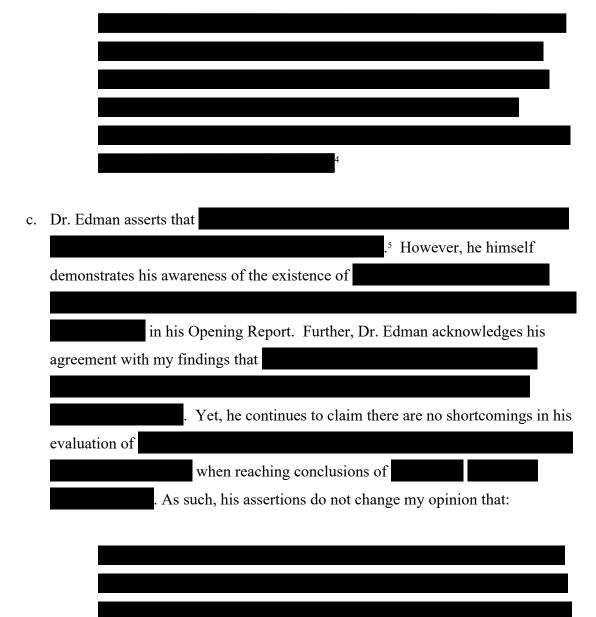
4. A list of the documents that I have considered in forming my opinions is attached to this declaration as Appendix A. The opinions presented in this declaration are the result of the information currently available to me. I reserve the right to revise my opinions in light of any additional materials, including data, documents, and depositions or other testimony that may subsequently come to light, or if I am asked to perform further research or analysis.

II. Summary of Opinions

5. Nothing in the Edman Rebuttal Report changes my opinions from my Opening Report. In particular, based on my experience, expertise, review of the evidence in this matter, and analysis of the Edman Rebuttal Report, I have reached the following conclusions:



³ Expert Report of Mr. Raj Unny, September 28, 2023 ("Unny Opening Report"), ¶ 11 quoting Edman Opening Report, ¶¶ 66, 70.



⁴ Unny Opening Report, ¶ 48.

 $^{^5}$ Rebuttal Expert Report of Dr. Matthew J. Edman, October 13, 2023 ("Edman Rebuttal Report"), \P 7.

⁶ Unny Opening Report, ¶ 11.

d.	In his Rebuttal Report, Dr. Edman relies on
	that
	too was only after he was pressed to do so in his deposition. He uses this to argue
	that I
	⁷ His
	. Thus, it in no way changes my opinion that:
	⁸ and
	9
e.	Dr. Edman's new conclusions in his Rebuttal Report related to
	contain several shortcomings and raise points undermining his Opening Report
	opinions and methodology. In particular, Dr. Edman appears to relax
	requirements related to as it suits his opinion.
	His arguments related to the
	obfuscate the fact that he did not do sufficient analysis to support the broad
	conclusions in his Opening Report. Furthermore, his argument that

⁷ Edman Rebuttal Report, ¶ 8.

⁸ Unny Opening Report, ¶ 32 quoting Edman Opening Report, ¶¶ 10–11.

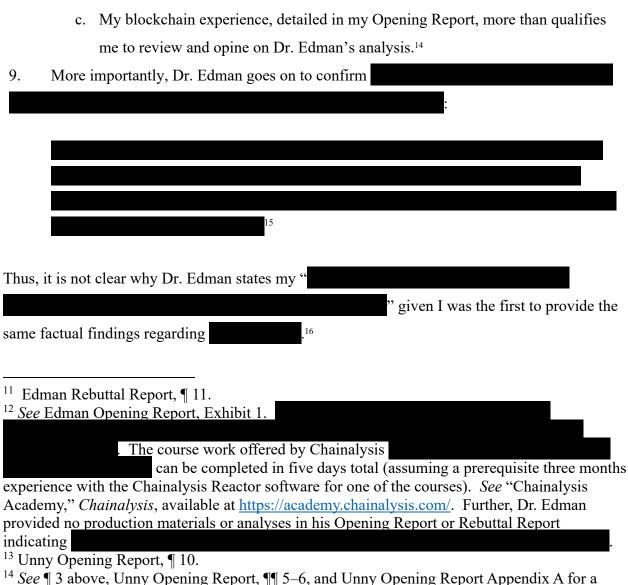
⁹ Unny Opening Report, ¶ 11 quoting Edman Opening Report, ¶¶ 11, 70.

	nothing in Dr. Edman's arguments changes my opinion that:	Inus
	10	
III.	The Blockchain Analysis in Dr. Edman's Rebuttal Report Only Serves to High the Omissions and Fundamental Flaws in His Opening Report Analysis and Re on New Arguments	_
6.	In Section III of his Rebuttal Report, Dr. Edman seeks to u	
	. However, he fails to identify where	
	. Furthermore,	
	. It also demonstrates the fundamental fla	lWS
with	his conclusions of Finally, Section III of Edman's Rebuttal Repor	t
inclu	that was not offered by Dr. Edman in his Opening Repo	rt.
	A. Dr. Edman Fails to Establish That My Opinions Are Based on Any Alleged of Blockchain Analytics Experience	Lack
7.	Dr. Edman seeks to	
	. I do not find his support for this claim compelling, especia	lly
give	en that his blockchain analysis confirms	
	in my Opening Report that the Edn	nan
Ope	ning Report included meaningful omissions.	
8.	Dr. Edman attempts to support his claims about	
¹⁰ Un	any Opening Report, ¶ 11.	

¹¹ In response, I

first note the following:

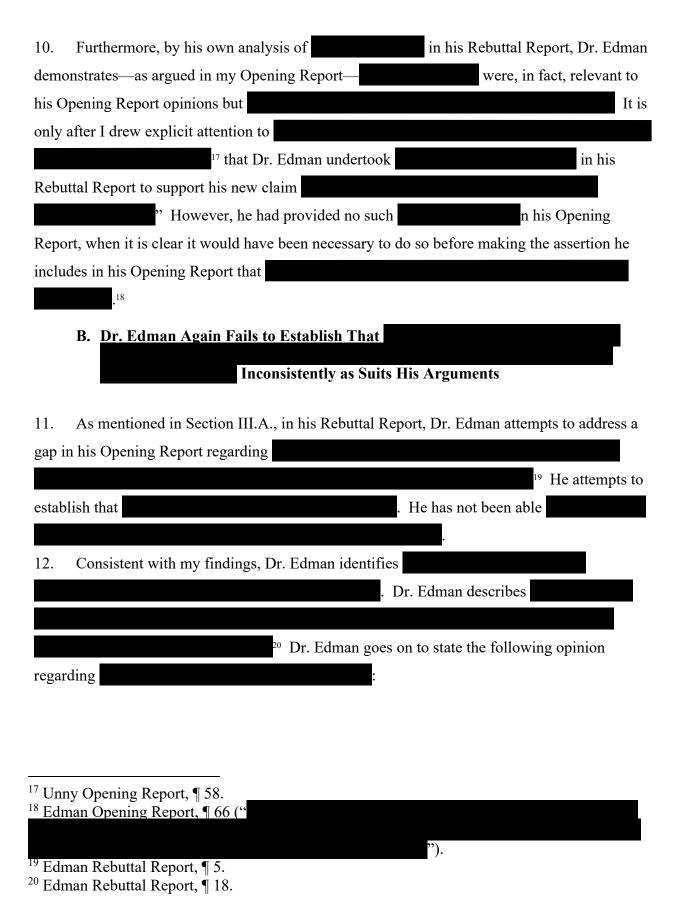
- a. The blockchain analysis credentials and training that Dr. Edman has received can be completed in five days, and therefore I would question using this as a measure of expertise in comparison to industry experience such as that outlined in Appendix A of my report.¹²
- b. As noted at the outset of my report, I am evaluating Dr. Edman's analysis not putting forward a new analysis.13

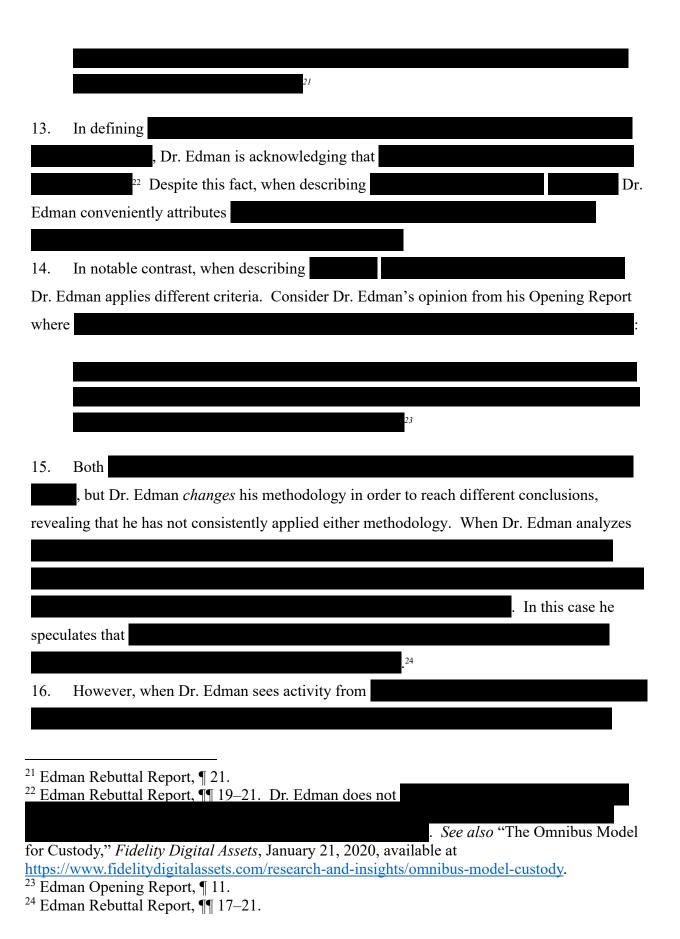


¹⁴ See ¶ 3 above, Unny Opening Report, ¶¶ 5–6, and Unny Opening Report Appendix A for a detailed discussion of my blockchain experience.

¹⁵ Edman Rebuttal Report, ¶ 15.

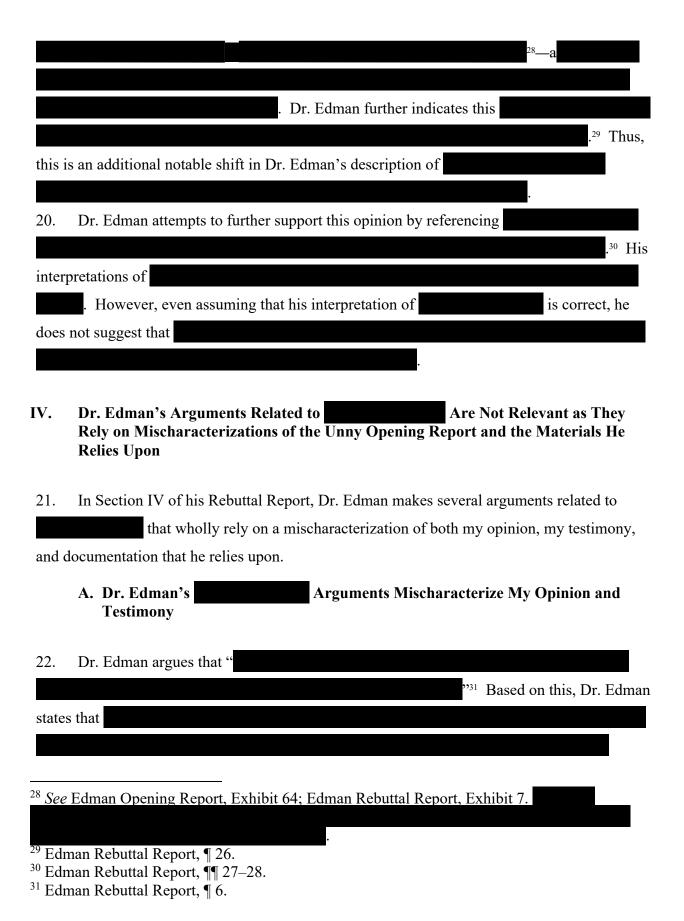
¹⁶ Edman Rebuttal Report, ¶ 12.





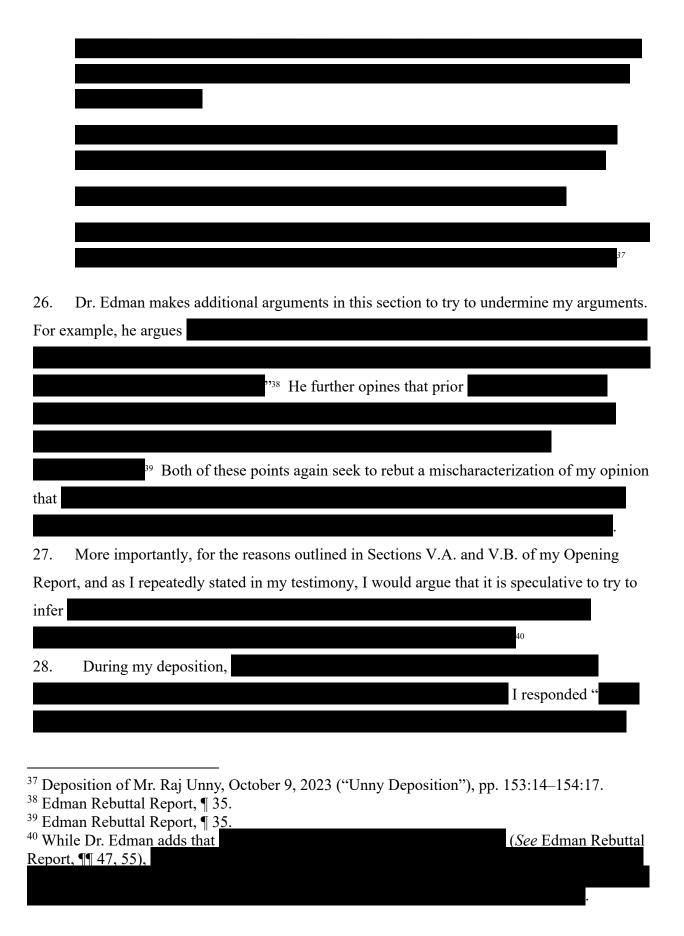
Instead, he claims that
In this way, Dr. Edman's assignment of
17. Furthermore, Dr. Edman's opinion and explanation is speculative. Dr. Edman argues that
17. Furthermore, Dr. Edman's opinion and explanation is speculative. Dr. Edman argues that
However, he does not
provide any clear evidence as to why
It seems that Dr. Edman is also not convinced by this
explanation as he only claims that
Thus, he still cannot conclusively
state that
C. <u>Dr. Edman Introduces a New Opinion Which Further Undermines His</u> Characterization
18. Dr. Edman introduces a new opinion to explain t
. He argues that
26
19. Dr. Edman does not put forward this opinion in his Opening Report. In fact, in his
Opening Report he describes
However, in his Rebuttal
Report, Dr. Edman now describes

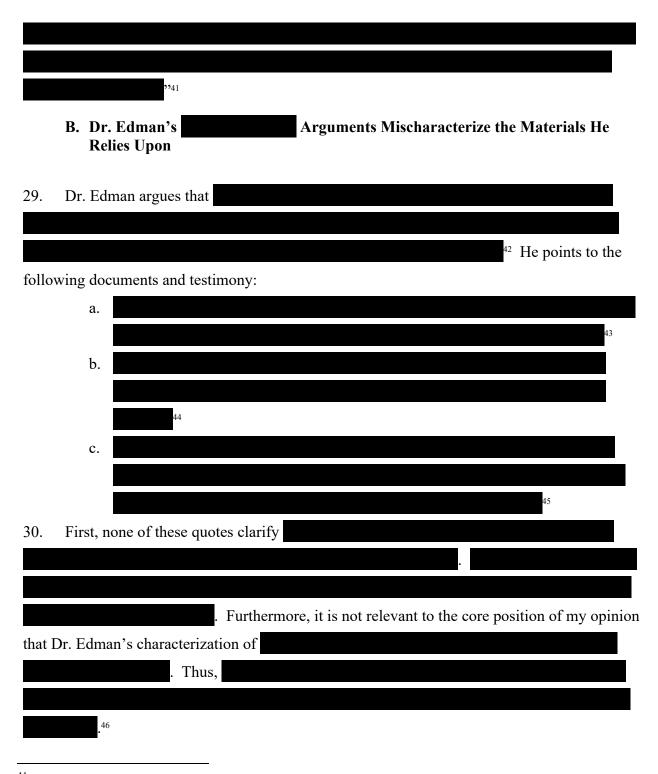
²⁵ Edman Rebuttal Report, ¶ 21 (emphasis added). ²⁶ Edman Rebuttal Report, ¶¶ 25–26. ²⁷ Edman Opening Report, ¶ 66.



"32 He	e continues by arguing that
	2733
23. Notably, however, Dr. Edman's entire argument	rests on his mischaracterization of my
opinion. I have not stated that	
. Instead, in my report I focused on Dr.	Edman's
specifically stating	g the following:
34	
24. It is <i>Dr. Edman</i> who has put forward the argumen	nt that
³⁵ Section V.C. in my Opening Report	t simply highlights that a system
	. As discussed in that section,
	³⁶ Thus, my argument is
simply that	
25. During my deposition, the SEC similarly attempt	ed to mischaracterize my opinion in this
way. However, during this line of questioning, I pointed	d out
	:

³² Edman Rebuttal Report, ¶ 31.
33 Edman Rebuttal Report, ¶ 32.
34 Unny Opening Report, ¶ 48 (emphasis added).
35 Edman Opening Report, ¶ 11.
36 Unny Opening Report, ¶¶ 49–50.





⁴¹ Unny Deposition, p. 155:6–15.

⁴² Edman Rebuttal Report, ¶ 6.

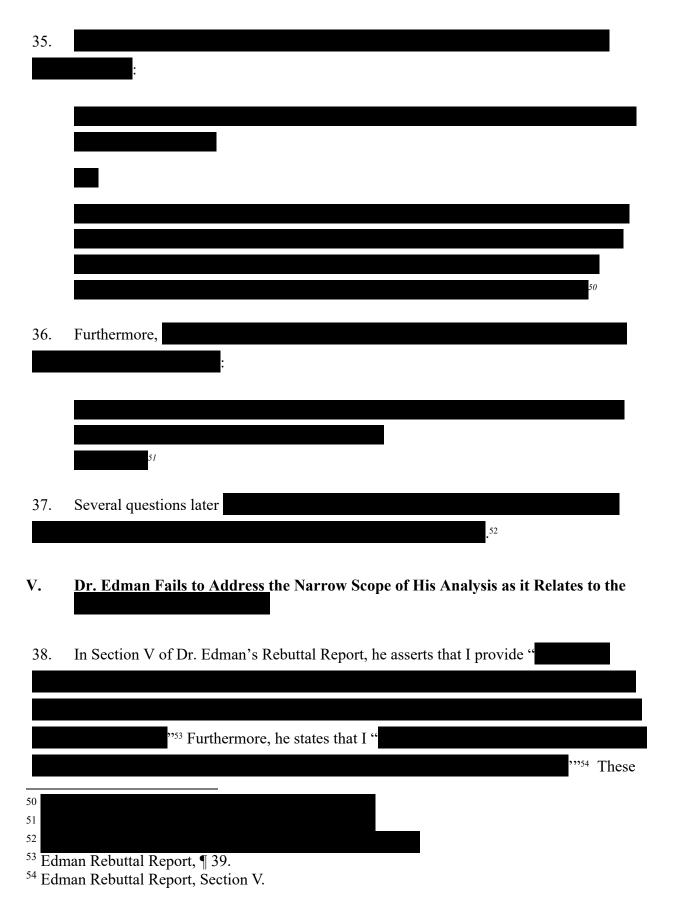
⁴³ Edman Rebuttal Report, ¶ 37.

⁴⁴ Edman Rebuttal Report, ¶ 37.

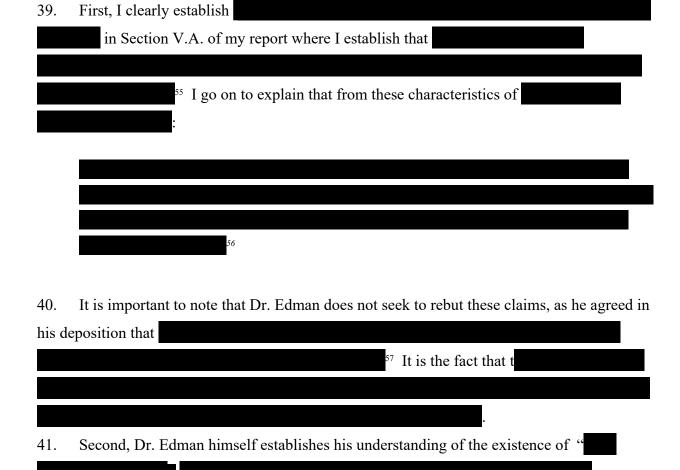
⁴⁵ Edman Rebuttal Report, ¶ 37.

⁴⁶ Edman Opening Report, ¶ 11.

31.	Second, there are potential concerns around the reliability of the documents Dr. Edman
cites.	
	·
32.	For example, while t
	and dis
ctator	and this ment seems inconsistent with and difficult to fully reconcile
State	(which Dr. Edman does not mention):
	(which Dr. Edinari does not mention).
	47
33.	Based on this, there are clear internal contradictions between Dr. Edman's source
docui	ments. In addition, Dr. Edman cannot
	48
34.	Third, Dr. Edman continues in his repeated practice of cherry-picking and
	naracterizing statements by ignoring
	. Specifically, Dr. Edman ignores that
	. For instance, only a few lines after Dr. Edman's quoted
stater	ment,
	49
.7	
¹⁸ For	example, it is difficult to know what precisely is meant in the email when it says C
	This could mean t
.9	



assertions are false, contradict facts relied on by Dr. Edman in his Opening Report, and are a misrepresentation of what is necessary to support my opinion.



PayPal, as the largest payment application in the world by market share,⁶⁰ provides a familiar user experience that is supported by numerous technical systems such as: a web and mobile application, gateways that allow users to link to their banks and credit cards, and

⁵⁵ Unny Opening Report, ¶¶ 36–37.

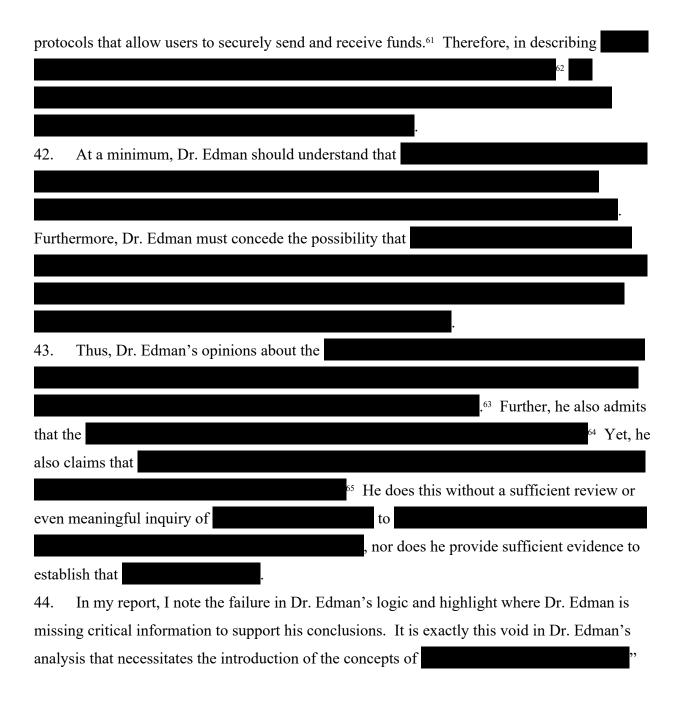
⁵⁶ Unny Opening Report, ¶ 38.

⁵⁷ Deposition of Dr. Matthew J. Edman, September 20, 2023 ("Edman Deposition"), p. 132:3–4.

⁵⁸ Edman Rebuttal Report, Section V.

⁵⁹ Edman Opening Report, ¶ 26.

⁶⁰ "Market share of online payment processing technologies worldwide as of July 2023," *Statista*, available at https://www.statista.com/statistics/895236/australia-market-share-online-payment-platforms/.



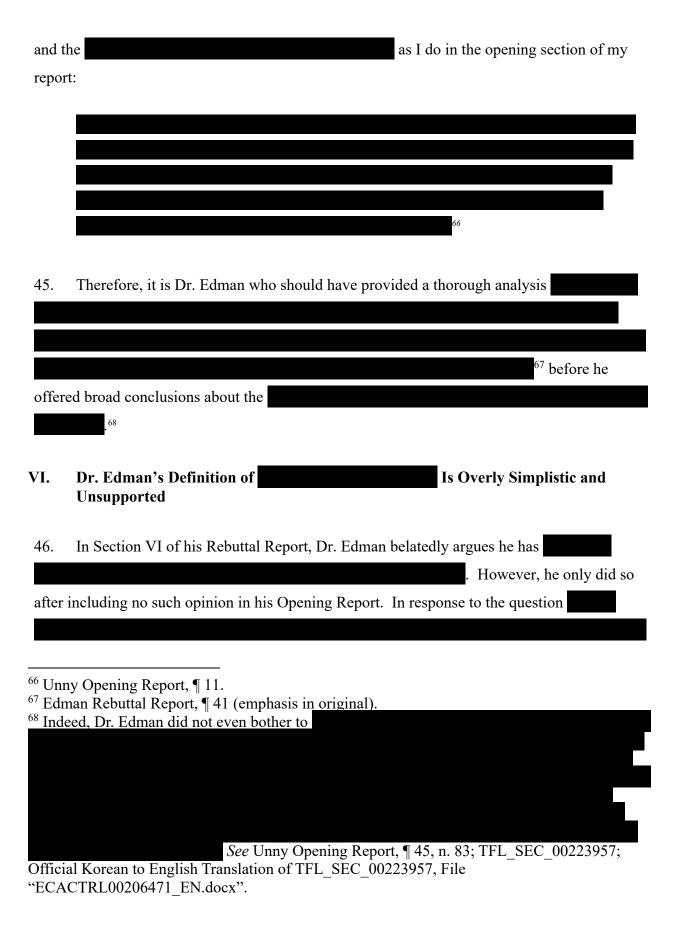
^{61 &}quot;Send money at the speed of life," *PayPal*, available at https://www.paypal.com/uk/digital-wallet/send-receive-money/send-money; "How do I link a bank account to my PayPal account?," *PayPal*, available at https://www.paypal.com/us/cshelp/article/how-do-i-link-a-bank-account-to-my-paypal-account-help183; "PayPal security guidelines and best practices," *PayPal Developer*, available at https://developer.paypal.com/api/rest/reference/info-security-guidelines/.

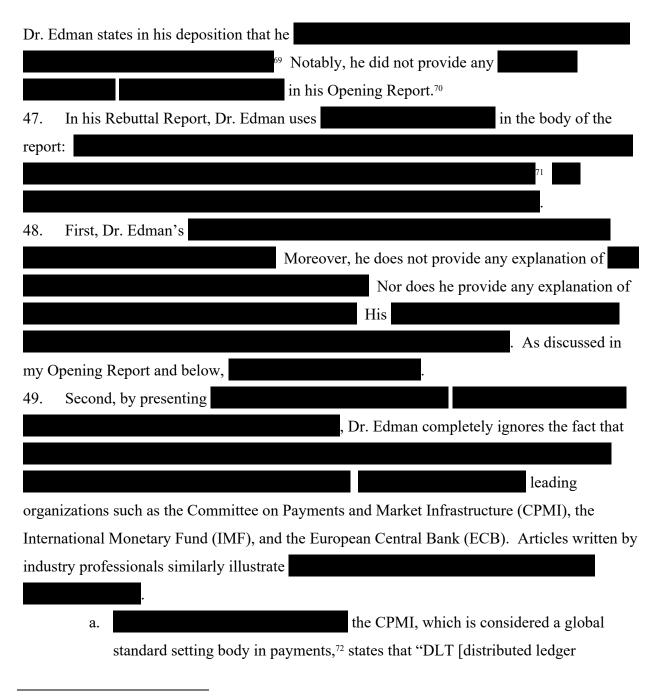
⁶² Edman Rebuttal Report, Section V.

⁶³ Edman Deposition, p. 132:3–4.

⁶⁴ Edman Opening Report, ¶ 42.

⁶⁵ Edman Opening Report, ¶ 11.





⁶⁹ Edman Deposition, pp. 198:22–199:3.

⁷⁰ As noted in my Opening Report,

See Unny Opening Report, ¶ 54.

⁷¹ Edman Rebuttal Report, ¶ 52.

⁷² See "CPMI – overview," Bank of International Settlements, available at https://www.bis.org/cpmi/about/overview.htm. For example, the Bank of Korea has recently announced that it will adopt a recent set of standards published by the CPMI. See "BIS CPMI publishes 'Harmonised ISO 20022 Data Requirements for Enhancing Cross-border Payments," Bank of Korea, October 18, 2023, available at https://www.bok.or.kr/eng/bbs/E0000634/view.do?nttId=10080032&menuNo=400069.

technology] arrangements vary significantly based on their functionality, nature of service, design, technology and processes. In order to analyse these types of arrangement[s], it is useful to apply a structured approach to understand the functionality and nature of a given service, and the key factors for its effective implementation."⁷³

b. An IMF report discussing the potential for digital money highlights in very simple terms: "How much for your coffee?' 1 euro, a dollar, 10 yuan . . . Whatever the price, we might pull out local notes and coins to settle the bill. Or we might swipe a card or wave our phone and walk away just as reassured that the coffee was paid for. Someone watching from another century would think it were magic. Indeed, it nearly is. *The steps, hidden from view, are extraordinarily complex, involving information exchange, legal and regulatory structures, as well as back-end settlement of funds*. And yet, we think nothing of it."

The European Central Bank (ECB) similarly

The ECB defines processing
as "the performance of all of the actions required in accordance with the rules of a
system for the handling of a transfer order from the point of acceptance by the
system to the point of discharge from the system. Processing may include
clearing, sorting, netting, matching and/or settlement."

It separately defines
settlement as "the completion of a transaction or of processing with the aim of
discharging participants' obligations through the transfer of funds and/or
securities. A settlement may be final or provisional."

Notably, Dr. Edman's

⁷³ "Distributed ledger technology in payment, clearing and settlement," *Bank for International Settlements*, February 2017, available at https://www.bis.org/cpmi/publ/d157.pdf, p. 10.

⁷⁴ Adrian, Tobias and Tommaso Mancini-Griffoli, "The Rise of Digital Money," *IMF*, July 2019, available at https://www.imf.org/en/Publications/fintech-notes/Issues/2019/07/12/The-Rise-of-Digital-Money-47097, p. 2 (emphasis added).

⁷⁵ "Glossary of Terms Related to Payment, Clearing and Settlement Systems," *European Central Bank*, December 2009, available at

https://www.ecb.europa.eu/pub/pdf/other/glossaryrelatedtopaymentclearingandsettlementsystems en.pdf ("ECB Glossary"), p. 22.

⁷⁶ ECB Glossary, p. 24.

simplistic definition

d. In an article titled "Payments Are Far More Complicated Than You Think," written for Forbes, a former Head of Global Product Operations on the Money Team at Uber, writes the following about her experience working on issues related to payment processing at Uber: "While clicking a button in an app to transfer money seems simple, there were layers of complexity and technology behind the scenes. Uber partnered with a bank to enable drivers to sign up for a free bank account, requiring complex partnership agreements, driver identity verification and system implementations. Then, the bank integrated with payment processors and networks to process the payments via API call — instead of the old way of processing a weekly driver payment, which was to upload a file to a bank portal."

50. Finally,

- a. Again, the CPMI report was written in order to "provide[] an analytical framework for central banks and other authorities to review and analyse the use of this technology for payment, clearing and settlement."
- b. Similarly, the United States Federal Reserve has outlined a framework for understanding how DLT arrangements support payment systems. As an example, in this report the Fed highlights the potential for a range of DLT arrangements in payments including arrangements that leverage DLT through existing traditional payment infrastructures. "Although the technology has the potential to provide a

⁷⁷ Barr Allen, Allison, "Payments Are Far More Complicated Than You Think," *Forbes*, June 30, 2020, available at https://www.forbes.com/sites/forbestechcouncil/2020/06/30/payments-are-farmore-complicated-than-you-think/?sh=8de7e764fc6b; Li, Jess, "An Interview with Allison Barr Allen, Head of Global Product Operations on the Money Team at Uber," *Medium*, July 18, 2019, available at https://medium.com/elpha-conversations/an-interview-with-allison-barr-allen-head-of-global-product-operations-on-the-money-team-at-uber-7549c014c6be.

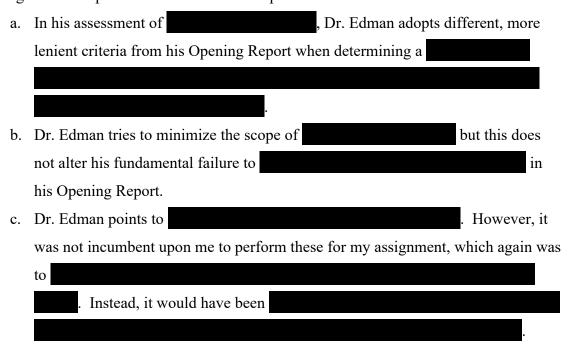
⁷⁸ Barr Allen, Allison, "Payments Are Far More Complicated Than You Think," *Forbes*, June 30, 2020.

⁷⁹ "Distributed ledger technology in payment, clearing and settlement," *Bank for International Settlements*, February 2017, available at https://www.bis.org/cpmi/publ/d157.pdf, p. iii.

new way of storing, recording, and transferring digital assets, at present most industry participants are looking at ways to integrate the technology into existing systems and institutions. Many models may alter or eliminate some roles of current intermediaries in payments, clearing, and settlement but may not necessarily eliminate the need for coordination or centralization of certain functions by trusted intermediaries. These trusted intermediaries could still be needed to play important roles in addressing frictions beyond what DLT may be able to accomplish or may be able to use DLT arrangements to improve or evolve how they accomplish their respective missions."80

VII. Dr. Edman's Analysis and Conclusions Related to Highlight the Failures of His Overall Conclusions

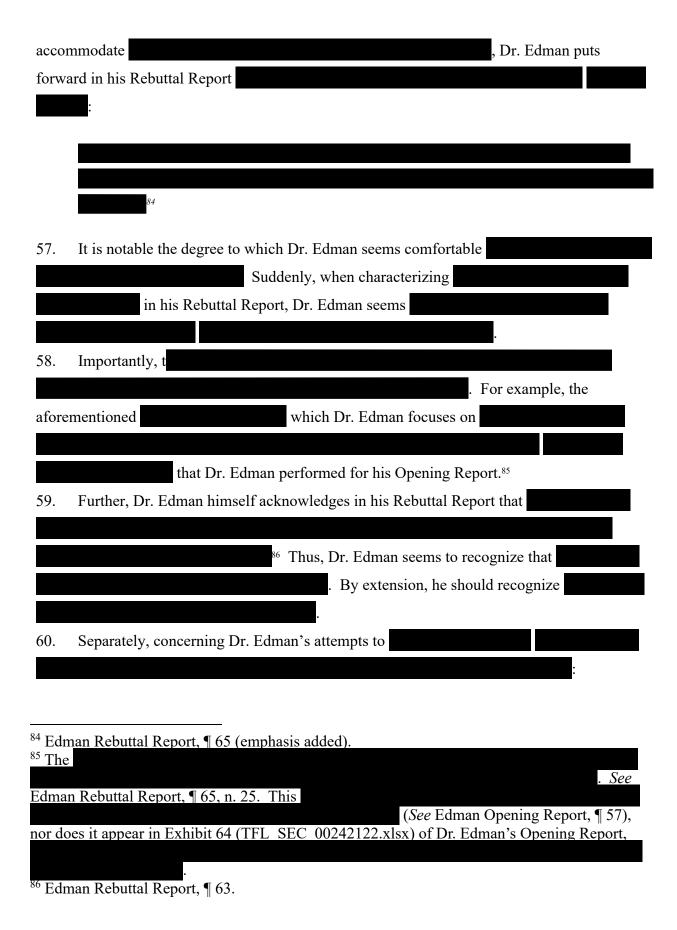
51. Dr. Edman's arguments in Section VII of his Rebuttal Report contain several shortcomings and raise points that undermine his opinions:

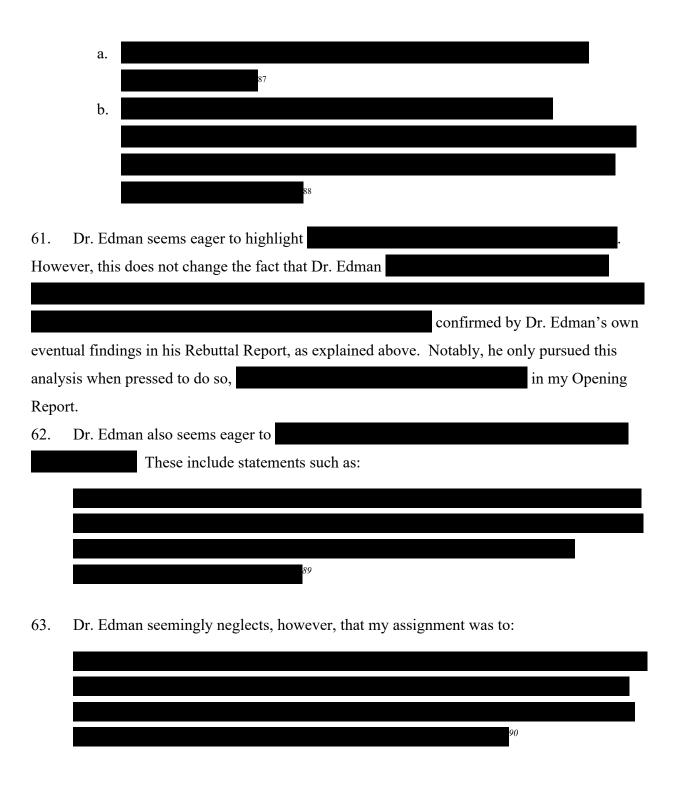


⁸⁰ Mills, David, et al., "Distributed ledger technology in payments, clearing, and settlement," *Federal Reserve*, December 2016, available at https://www.federalreserve.gov/econresdata/feds/2016/files/2016095pap.pdf (emphasis added).

52.	Dr. Edman meaningfully revises and relaxes his previously established criteria for a
	from his Opening Report. Throughout his Opening Report, Dr. Edman placed
repea	ated emphasis on .
This	was seemingly a critical part of his characterization of
53.	He states at the beginning of his Opening Report:
	81
54.	Later, he goes on to reiterate:
	82
55.	Finally, he draws the closing conclusion of his report as follows in the last paragraph:
	83
56.	However, in his Rebuttal Report, Dr. Edman significantly Rather than requiring the
	. Specifically, to

<sup>Edman Opening Report, ¶ 11 (emphasis added).
Edman Opening Report, ¶ 66 (emphasis added).
Edman Opening Report, ¶ 70 (emphasis added).</sup>





⁸⁷ Edman Rebuttal Report, ¶ 60.

⁸⁸ Edman Rebuttal Report, ¶ 64.

⁸⁹ Edman Rebuttal Report, ¶ 59.

⁹⁰ Unny Opening Report, ¶ 10.

64.	
	Dr. Edman's
statements therefore only serve as reminder of	, and in
particular, support my opinion that "	
91	

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on October 27, 2023 in Zug, Switzerland,

Raj Unny

Raj Unny

⁹¹ Unny Opening Report, ¶ 11.